REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE (DD-MM-YYYY)	2. REPORT TYPE	3. DATES COVERED (From - To)
JUN 2004	Master's Thesis	Jul 2003 to Jul 2004

4. TITLE AND SUBTITLE

The Military Healthcare System Third Party Collection Program: Analyzing the Effectiveness of the Other Health Insurance (OHI) Information Collection Process.

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)

Weinberg, Edward J., CPT, U.S. Army Medical Service Corps

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Residency Site:
USA MEDDAC, Fort Belvoir
9501 Farrell Road
Fort Belvoir, VA 22060

8. PERFORMING ORGANIZATION REPORT

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

US Army Medical Department Center and School
BLDG 2841 MCCS-HRA (Army-Baylor Program in Healthcare Administration)
3151 Scott Road, Suite 1411
Fort Sam Houston, TX 78234-6135

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

10-04

12. DISTRIBUTION / AVAILABILITY STATEMENT

Approved for public release; distribution is unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT

The purpose of this research was to assess the effectiveness of the OHI information collection process in a uniformed services military treatment facility (MTF). 442 OHI surveys were administered to beneficiaries presenting civilian prescriptions to the MTF outpatient pharmacy from 01 to 29 February 2004. The average level of OHI present in the sample analyzed was 31.9 percent. OHI was regressed upon predictor variables consisting of zip code, age group, beneficiary category, TRICARE Prime enrollment, average number of prescription drugs required per month, and percentage of time the MTF is used for prescription drug needs. Multiple linear regression results indicated a statistically significant relationship in the prediction of having OHI, with $R2 = .192$, $F(13, 428) = 7.829$, $p < .0001$. Further hypothesis tests with hierarchical multiple regression analyses indicated that all predictor variables made substantive unique contributions to having OHI with the exceptions of the number of drugs per required per month and the zip code to the beneficiaries' place of residence. The results of the OHI survey were used to conduct an abbreviated business case analysis. With complete OHI information, third party collections for filling civilian prescriptions alone could conservatively be increased from $3,490 to $403,146 annually.

15. SUBJECT TERMS

TPCP, Third Party Collections, Insurance, OHI, MHS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Education Technician
U	U	U	UU	57	19b. TELEPHONE NUMBER (include area code) (210) 221-6443

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

Running head: OHI COLLECTION EFFECTIVENESS

DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution Unlimited

Graduate Management Project

The Military Healthcare System Third Party Collection Program: Analyzing the Effectiveness of the Other Health Insurance (OHI) Information Collection Process

CPT Edward J. Weinberg

United States Army Academy of Health Sciences

&

U.S. Army Baylor Masters Program in Healthcare Administration

20050419 067

Disclaimer Notice as Required by Army Regulation 360-5

"The opinions or assertions contained herein are the private views of the author and are not to be considered as official policy or positions, or as reflecting the views of the Department of the Army, the Department of Defense, the United States Government, or Baylor University."

Acknowledgements

I am extremely grateful to my faculty advisor LTC Kevin LaFrance and my preceptor LTC Dawn Smith for their counsel as well as their seemingly instantaneous feedback throughout the course of this research project. I extend my heartfelt thanks to MAJ Alex Lopez-Duke, MAJ Todd Echols, MAJ Steve Hankins, and Mrs. Brenda Gaines for their expert direction and guidance. I would also like to thank Ms. Kelly J. Woody, Mr. Bob H. Johnson, Ms. Aretha Woods, and the various Red Cross volunteers who assisted with the data collection process. My thanks go as well to MAJ Travis Watson for his coordination efforts and Mrs. Shannon Paul for providing information on the WRHCS patient kiosk solution. I would like to express my most sincere thanks to LTC Peter Bulatao, Chief, Department of Pharmacy DHCN for his expert guidance, support and mentorship.

Finally I must acknowledge the contributions made by my wife Melissa, and daughters Alexandra and Mackenna. Throughout the didactic phase as well as the residency portion of the U.S. Army Baylor experience, they have been my source for inspiration and drive. I am truly blessed.

Abstract

The purpose of this research was to assess the effectiveness of the OHI information collection process in a uniformed services military treatment facility (MTF). 442 OHI surveys were administered to beneficiaries presenting civilian prescriptions to the MTF outpatient pharmacy from 01 to 29 February 2004. The average level of OHI present in the sample analyzed was 31.9 percent. OHI was regressed upon predictor variables consisting of zip code, age group, beneficiary category, TRICARE Prime enrollment, average number of prescription drugs required per month, and percentage of time the MTF is used for prescription drug needs. Multiple linear regression results indicated a statistically significant relationship in the prediction of having OHI, with $R^2 = .192$, $F(13, 428) = 7.829$, $p < .0001$. Further hypothesis tests with hierarchical multiple regression analyses indicated that all predictor variables made substantive unique contributions to having OHI with the exceptions of the number of drugs per required per month and the zip code to the beneficiaries' place of residence. The results of the OHI survey were used to conduct an abbreviated business case analysis. With complete OHI information, third party collections for filling civilian prescriptions alone could conservatively be increased from $3,490 to $403,146 annually.

Table of Contents

ACKNOWLEDGEMENTS 3

ABSTRACT 4

LIST OF FIGURES AND TABLES 7

INTRODUCTION 8

Conditions Prompting the Study 9

Statement of the Management Question 12

Literature Review 13

The Rising Cost of Healthcare *13*

History of the Third Party Collection Program *16*

The TRICARE System *19*

The TRICARE Pharmacy Benefit *22*

Statement of Purpose 25

METHODS AND PROCEDURES 26

Sample and Data 26

Operationalization of Variables 27

Instrumentation 30

Analytic Methods 30

RESULTS 32

Descriptive Statistics 32

Hierarchical Multiple Regression Analysis 38

Abbreviated Business Case Analysis 39

DISCUSSION 41

Business Associate Agreement 42

Alternatives to Assist MTFs in TPC Efforts 44

Additional Items to Consider 46

LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH 47

CONCLUSION 48

APPENDICES 50

Appendix A – DD Form 2569 50

Appendix B – OHI Survey Cover Letter 51

Appendix C – OHI Survey 52

Appendix D – Patient Kiosk Solution 53

REFERENCES 54

List of Figures and Tables

Figures:

Figure 1: DHCN TPC HISTORY FY 91-FY 03 10

Figure 2: DHCN TPC History/Beneficiary Population FY97-FY03 ... 11

Tables:

Table 1: Sample Means & Standard Deviations 33

Table 2: Bivariate Correlations 35

Table 3: Discriminant Function Analysis 37

Table 4: Hierarchical Multiple Regression Analysis 39

The Military Healthcare System Third Party Collection Program: Analyzing the Effectiveness of the Other Health Insurance (OHI) Information Collection Process

Introduction

Overt, monumental changes such as Medicaid and Medicare, coupled with changes that were far more subtle, such as the adoption of diagnosis-related groups and prospective payment systems, have forever changed the landscape of the American healthcare environment. As healthcare costs continue to spiral out of control, healthcare organizations continuously strive to devise innovative ways of maintaining fiscal viability. The military healthcare system (MHS) has not been isolated from these tumultuous changes, and in response, has begun to incorporate civilian best-business practices into the operations of their uniformed services military treatment facilities (MTFs).

The third party collection program (TPCP) is one such business practice the MHS has implemented to mitigate the impact of rising healthcare costs and increased civilian competition. In accordance with Federal law, MTFs are required to bill third party payers reasonable charges for the delivery of health care to beneficiaries enrolled in third party health plans such as Blue Cross/Blue Shield, Medicare supplemental plans, and workers compensation (32 CFR 220, 2000).

Since the inception of the MHS TPCP, several problems have repeatedly plagued MTFs including missed billing opportunities due to insufficient identification of insured beneficiaries, inadequate documentation to support coding/billing, coding problems resulting in unidentified care, and unpaid accounts receivable (TMA, 2001). This research focuses on one of these aspects, missed billing opportunities. The research is an exploration of the TPCP, particularly the effectiveness of current OHI information collection processes.

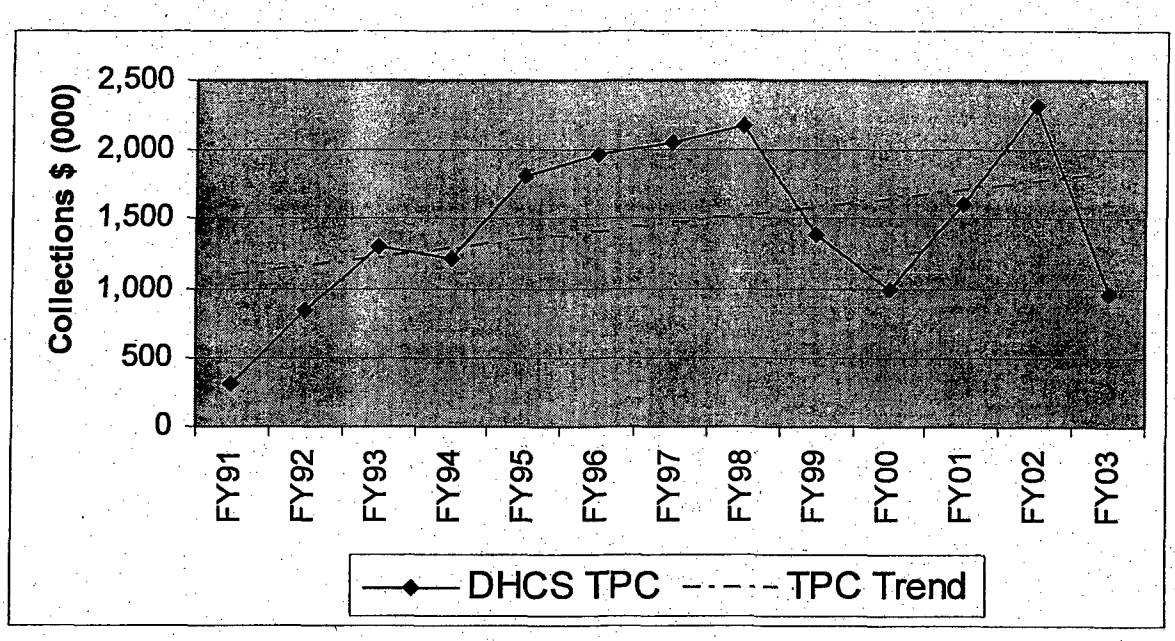
Conditions Prompting the Study

The DeWitt Health Care Network (DHCN), comprised of DeWitt Army Community Hospital (DACH), Andrew Rader Health Clinic on Fort Myer, and two freestanding contracted family health centers located in the cities of Fairfax and Woodbridge, has been actively participating in the TPCP since the middle of fiscal year (FY) 1991. The annual third party collections for DHCN from FY 1991 through FY 2003 are provided in figure I.

As can be seen in figure I, the collection trend over the past decade has been positive. Although this trend is favorable, the collection information presented alone is a bit misleading. As with the implementation of any new system/process, undoubtedly there will be an initial period of learning and growth. Based on the cultural change required by

Figure 1

DHCN TPC History FY91-FY03

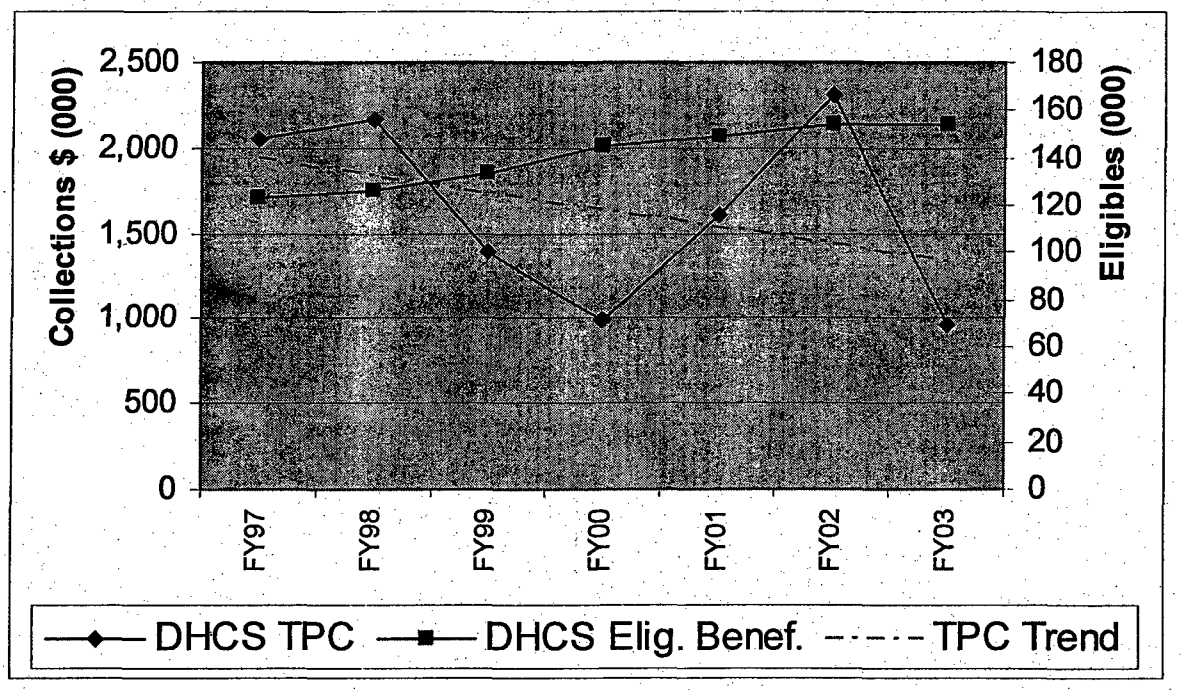


the MHS due to the implementation of the TPCP, the initial years' collections were limited. It wasn't until FY 1997 when annual third party collections began to reach the flat of the curve at approximately $2 million dollars.

To provide a more realistic portrayal of the trend associated with DHCN's third party collection history, Figure II presents annual collections from FY 1997 through FY 2003. The TRICARE eligible population for the same years is overlaid on top of the collection data series to show the relationship between the two. Although intuitively one might anticipate an increase in third party collections proportional to an increase

Figure 2

DHCN TPC History/Beneficiary Population FY97-FY03



in the TRICARE eligible beneficiary population, the inverse to this relationship has occurred (FY03 data is partially skewed due to the implementation of the outpatient itemized billing system in October 2002). While there are numerous confounders that can contribute to the poor performance of a TPCP, according to GAO-04-322R (2004) "The single biggest obstacle to increasing collections…is inadequate identification of patients with third-party insurance." Since implementation of the TPCP at DHCN, several marketing and advertising initiatives have been implemented in an attempt to educate healthcare beneficiaries about the importance and lawful requirement for the disclosure

of OHI information. The hypothesis is that these attempts have proven to be ineffective.

Much of the setback with achieving full disclosure of OHI information is the beneficiaries' perception of the potential for a perverse incentive. Some see the program as a back-door swipe at their entitlement for free health care. Others worry that their insurance premiums will increase as the military continues to grow more aggressive with claims processing (McCollum, 1997). Based on these uncertainties, doubt is cast on the MHS's ability to truly capture OHI information from all beneficiaries receiving treatment in MTFs. The assertion made by the researcher is that voluntary disclosure is an unreliable collection method and is responsible for millions of dollars in potential claims going unbilled and uncollected each year.

Statement of the Management Question

This study asks the question: Is the current system for collecting and maintaining OHI information effective? The hypothesis is that voluntary disclosure of OHI information is not a reliable collection method. To limit the scope, this research will primarily focus on those beneficiaries using the MTF pharmacy to redeem hand written prescriptions received from network and non-network providers. Sampling of this particular population for study was done for several reasons: 1) The nature of the encounter is more objective than a patient visit (either

the prescription was issued or it wasn't) making the estimation for potential revenue more concrete; 2) The assumption that this population has a higher prevalence of OHI, signifying higher potential collections; and 3) This population is the least likely to be screened for OHI because the visit associated with the prescription was with a network/non-network provider.

Literature Review

Little research has been conducted on third party collections and the OHI information collection process. Although the General Accounting Office (GAO) has published several reports on the effectiveness of third party collections within the MHS, existing literature on the OHI information collection process is sparse. Therefore, the following literature review expands upon the conditions prompting this study and provides background information on the TPCP history and TRICARE system.

The Rising Cost of Healthcare

The fact that healthcare costs are rising in America should come as no great surprise to anyone. Rising healthcare costs are evidenced by the increasing proportion healthcare is consuming of the gross domestic product (GDP), reports that Medicare will not maintain fiscal viability without serious Congressional overhaul, the need for medical malpractice tort reform, the need for a prescription drug benefit for seniors that could cost roughly $400 billion over the first decade of implementation,

the debate over generic vs. brand name prescription drugs, the aging of the American population, the nursing labor shortage, and the debate over re-importation of prescription drugs from Canada as well as other countries. With these and many other cost related factors proliferating, the healthcare delivery system, to include the MHS, must continue to research new alternatives for balancing quality, accessible healthcare with escalating costs (Shi & Singh, 2001).

To the layperson, many of these ideas may seem conceptual in nature and are only important once they have stricken him or her personally in some way. A tangible understanding of the impact rising healthcare costs are having on America can be gained by observing the impact on other industries. According to Murray (2003) the current system of employer-sponsored healthcare is an anomaly and was created as an accident. "In the 1940s, during the Second World War, wage and price controls were placed on American employers, and in order to compete for employees, they could offer health benefits" (Murray, 2003, p. 1).

Unfortunately, Americans have grown accustomed to employers providing a large portion of their healthcare benefits. In 2003 GE employees from over 48 different locations staged their first national strike in three decades. The primary issue addressed by both sides was the 14.8 percent rise in employee health

insurance premiums, which equates to roughly $4,564 annually per employee (Stires, 2003). Another market severely affected by rising healthcare costs is the automotive industry. Stires puts the healthcare cost crisis into perspective when he states that U.S. automakers spent $8.8 billion on health care in 2002 for 2.2 million workers and their family members, which roughly equates to $1,200 per automobile produced.

The significance of the impacts felt by other industries underscores the importance of the TPCP. The MHS operates on a semi-fixed annual budget. Much of the annual budget an MTF receives is for the provision of care, leaving little for capital expenditures that could potentially increase access or quality of care. TRICARE beneficiaries unable to receive quality healthcare at MTFs within guaranteed access standards are referred to the civilian network. Without additional revenue flowing back into the MTFs, more and more care will be leaked to the civilian network potentially leading to the ultimate demise of the MHS. The TPCP is a source for additional funds above and beyond that appropriated for by Congress. The splendor of the TPCP is that the funds it generates are reserved solely for the enhancement of healthcare services at the MTF responsible for the collection (DoD, 2002).

The Department of Defense (DoD) provides medical care under TRICARE for active duty personnel, retirees, and the family

members of each in MTFs as well as through civilian network providers. In 2003, TRICARE spent $26.4 billion on the more than 8.7 million TRICARE eligible beneficiaries (GAO-04-69, 2003). Collecting from third party payers for treatment rendered to non-active duty beneficiaries in MTFs is a way to help defray the cost associated with providing the TRICARE benefit. Approval by the Pentagon for the MHS to move to an electronic medical record (Caterinicchia, 2002) certainly holds promise for improved coding and documentation of records. Nevertheless, until MTFs can fully capture OHI information, revenue to the facility will continue to be lost.

History of the Third Party Collection Program

The COBRA Act of 1986 established the TPCP (Denner, 2003). The TPCP was implemented after Congress came to the realization that civilian health plans were receiving a windfall from dual enrolled beneficiaries who routinely use MTFs as their primary source of healthcare. Under the TPCP, MTFs are authorized, and obligated, to bill health insurance organizations for the cost of medical care furnished to all family members and retired personnel covered by OHI policies (such as group insurance, individual insurance and Medicare supplemental policies) (10 U.S.C. 1095, 1956). In addition to TRICARE, working family members of active duty soldiers and retirees in their second careers often receive health benefits from their employers, or

choose to purchase additional health coverage for various reasons. Many Medicare eligible beneficiaries and their family members also purchase supplemental health insurance to shield them from rising out of pocket costs (Shi & Singh, 2001). Lawfully, the third party payer has a statutory obligation to reimburse the MTF as long as services provided by the MTF continue to meet reasonable utilization review provisions (32 CFR 220, 2000). According to 32 CFR 220 (2000), MHS beneficiaries are required to provide OHI information and any false or willful neglect in doing so could result in forfeiting that beneficiaries rights to healthcare in MHS facilities. Although mandated by the CFR, in practice this amounts to nothing more than suggested voluntary disclosure where beneficiaries do not perceive serious, if any, repercussion if they fail to do so.

The process for collecting OHI information at MTFs is somewhat standardized, but the execution of the process is fraught with variation. As previously stated, collecting from third party payers by MTFs is required by law; however, not all MTFs are equally as aggressive in obtaining the OHI information necessary to process these claims (TMA, 2001). The General Accounting Office (GAO) conducted a review of three military hospitals in November of 2002 and found that in all three institutions, patients were not routinely asked to provide

insurance information. When the OHI information was obtained, many times it was not used to generate bills (Pace, 2002).

Within the DHCN, all beneficiaries are required to fill out a Department of Defense Form 2569 (Appendix A), Record of Other Health Insurance. Before each appointment and upon an admission, beneficiaries are asked whether they have any form of health insurance other than their TRICARE benefit. A request for other health insurance information should be made by the appointment clerk at the time the appointment is booked or by the desk clerk at the clinic when the scheduled appointment is kept. The information from the DD form 2569 is entered into the Composite Health Care System (CHCS) database. Each time a beneficiary is treated at the MTF, a Standard Ambulatory Data Record (SADR) is generated through CHCS. The SADR information is transmitted to the CHCS server at the National Naval Medical Center in Bethesda, Maryland. A Third Party Outpatient Collection System (TPOCS) server at Walter Reed extracts only those SADRs from CHCS that are populated with OHI information. This process enables the TPOCS administrators within the DHCN TPCP to generate bills, manage claims, and collect from third party payers for care rendered within the MTF. The original DD form 2569 is entered as a permanent part of each beneficiary's outpatient medical record. A copy of the DD form 2569 is forwarded to the TPCP business office to be filed. According to

10 U.S.C. 1095 (1956), beneficiaries are required to update their OHI information on an annual basis. The facility should afford the beneficiaries with the maximum opportunity to ensure these updates and/or changes are accomplished.

The TRICARE System

In order to fully understand the TRICARE pharmacy benefits, it is necessary to understand the TRICARE health plan structure. TRICARE eligible beneficiaries have several options when deciding which health plan they will choose for themselves as well as their family members. According to the TRICARE Handbook (2004), the three basic TRICARE options are Prime, Extra, and Standard.

TRICARE Prime enrollment is mandatory for Active duty service members and is available as an option to their family members and to Retirees and their family members under the age of 65. TRICARE Prime serves much like a health maintenance organization (HMO) where the beneficiaries are given priority status for access within the MTF for primary care and specialty services. Priority access for Prime patients is defined as urgent care within 24 hours, a routine appointment within 7 days, routine specialty care within 30 days, and wellness and health promotion appointments within 30 days. Access is important, however, this option provides beneficiaries with the least amount of provider choice, as they are not authorized to

receive care outside of the MTF unless an emergent condition exists or as approved on a case-by-case basis. Beneficiaries enrolled in TRICARE Prime have no annual deductible; however there are annual enrollment fees as well as civilian co-pays associated with this option if care is authorized and rendered to retirees and their family members by a non-MTF provider.

TRICARE Extra has no associated enrollment, and is much like a preferred provider organization (PPO) where care is rendered within the MTF on a space available basis. Under TRICARE Extra beneficiaries are required to pay a deductible (calculated on a sliding scale, but no more that $300 per family per year), and have a 15% co-pay for outpatient visits. If a network provider renders the care, the co-pay for a civilian outpatient visit is less costly than if the beneficiary were enrolled in TRICARE Standard.

TRICARE Standard is much like a traditional indemnity plan. There is no associated enrollment for this option and MTF care is provided on a space available basis. Standard is the option that provides beneficiaries with the most flexibility in choosing a provider; however, with more choice comes a higher associated cost share. The deductible amount is the same as for those seeking care under TRICARE Extra, but the network outpatient visit co-pay is 20% (5% higher than TRICARE Extra). Several other differences exist between each of these health

plans regarding civilian inpatient admissions, civilian inpatient mental health, and civilian inpatient skilled nursing facility care (TRICARE Handbook, 2004).

Although there are three basic health plan options available to eligible beneficiaries within the TRICARE system, two additional programs have made a significant impact on the way beneficiaries receive care. These additional programs are TRICARE For Life (TFL) and TRICARE Plus.

TRICARE For Life is not a health plan, but is rather a permanent entitlement program that does not need annual recertification by Congress (TRICARE Handbook, 2004). The TFL program was made effective on 01 October 2001. Once Medicare eligible, the TFL entitlement provides uniformed services retirees and their eligible family members and survivors with expanded medical coverage. TRICARE For Life serves as a secondary payer for eligible TFL beneficiaries who seek care from Medicare providers. No monthly premiums are associated with TFL; however, beneficiaries participating in TFL must be enrolled in Medicare Part B, which does have a monthly premium associated with it (TRICARE Handbook).

TRICARE Plus is an enrollment option for eligible beneficiaries that are not enrolled in TRICARE Prime and do not have a primary care relationship through a civilian or Medicare HMO. Enrollment in TRICARE Plus is available only at select MTFs

and enrollment capacity is determined based on the local MTF commander's discretion. TRICARE Plus allows for non-Prime beneficiaries to receive appointments for primary care services with their assigned primary care manager (PCM) within the same access standards allotted for Prime patients (TRICARE Handbook, 2004). Priority for TRICARE Plus enrollment should be to those beneficiaries who already have a relationship with a PCM at the MTF. TRICARE Plus is only an enrollment option and is not to be confused with the Prime, Extra and Standard health plan options. TRICARE Plus only provides for a primary care relationship with an MTF and is not transferable from one MTF to another (TRICARE Handbook).

The TRICARE Pharmacy Benefit

The TRICARE pharmacy benefit offers a multitude of options enabling beneficiaries to receive the prescription drugs they require. Each of these options varies in regard to the out of pocket expense to the beneficiary. The most cost effective option for the beneficiary is to utilize the outpatient pharmacy services provided by the MTF. Other options include the use of the TRICARE Mail Order Pharmacy (TMOP), use of network pharmacies, and the most costly option is to use a non-network pharmacy provider. For familiarization purposes, a summary from the TRICARE Handbook is provided for each of these options (TRICARE Handbook, 2004, chap. 9).

The MTF pharmacy is clearly the most advantageous option to beneficiaries in terms of cost savings. There are no co-payments required when an MTF outpatient pharmacy is used; even when civilian prescriptions are filled (civilian prescriptions are not filled if not on the MTF's formulary). Each MTF is required to maintain enough medications to meet the majority of the primary care needs for their enrolled beneficiaries. The DoD has prescribed a Basic Core Formulary (BCF) spanning all three services to ensure for standardization from one MTF pharmacy to another. This formulary is updated quarterly by the DoD Pharmacy and Therapeutics Committee. Based on the scope of service and medical staff requirements, the BCF can be augmented. Provisions are also made if a patient under the care of an MTF provider requires the use of a prescription not on the BCF. As with other services rendered at an MTF, when a beneficiary has OHI, TRICARE then becomes the secondary payer.

The TMOP is a contract service through Express Scripts. Next to the MTF, the TMOP is the most cost effective pharmacy service available to beneficiaries. The TMOP is certainly the most convenient for those beneficiaries who require prescriptions on a chronic basis, such as for the treatment of asthma, diabetes, or high blood pressure. To use TMOP, beneficiaries simply mail a copy of their handwritten prescription signed by their U.S. licensed healthcare provider

along with their co-pay to Express Scripts. Beneficiaries using TMOP will be required to pay a co-pay of three dollars for up to a 90-day generic prescription and nine dollars for up to a 90-day brand-name prescription. Once the initial prescription is received, refills can then be obtained by contacting TMOP via the mail, phone, or Internet. There are no costs associated with this service for active duty personnel.

If beneficiaries are reluctant to use the MTF pharmacy as well as TMOP, the options of using network and non-network pharmacies remain. TRICARE network pharmacies are retail pharmacies that have contracted to serve TRICARE beneficiaries. Unlike the MTF or TMOP where beneficiaries can receive up to a 90-day supply, a 30-day supply is the maximum when using the network. Co-payments are also associated with the network pharmacy program. For a 30-day supply of medication, the cost to the beneficiary is three dollars for generic and nine dollars for brand name medications. In addition to the co-pay, the beneficiary is merely required to present the written prescription along with a valid military identification card to the pharmacist to complete the transaction.

Undoubtedly, the most expensive pharmacy option for the beneficiary is to use a non-network pharmacy. Before any reimbursement is received for prescriptions filled by a non-network pharmacy, the TRICARE annual deductible ($150 per

individual, $300 per family or $50 per individual, $100 per family for uniformed services members whose pay-grade is E4 or below) must be met. Normally, the full cost of the prescription must be paid in advance. Upon submitting the requisite claim (DD form 2642), the beneficiary can reasonably expect to receive reimbursement for approximately 80 percent of the full cost.

Statement of Purpose

The purpose of this study is to analyze the effectiveness of the current OHI information collection process, further define the population characteristics associated with having OHI, express the potential for revenue gain associated with having complete and accurate OHI information, and to discuss the feasibility of entering into a business associate agreement allowing for the exchange of OHI information between the DHCN TPCP business office and third party payers.

There are four objectives to this study:

Objective I. Conduct an OHI survey of DHCN beneficiaries presenting a civilian or hand written prescription to the DACH outpatient pharmacy (Appendix B & C). Fulfilling this objective will satisfy the majority of the research question by providing the data required for defining the proportion and characteristics of the population maintaining OHI, for predicting which beneficiaries are most likely to have OHI, and

for conservatively estimating the revenue projection figures associated with increasing pharmacy third party collections.

Objective II. Using the data collected from the OHI survey, explain the descriptive statistics associated with the demographics of the DHCN beneficiary population that predominantly maintains OHI, and identify statistically significant predictors of having OHI through techniques of hierarchical multiple regression analysis.

Objective III. Conduct an abbreviated business case analysis (BCA) to provide a conservative estimate for increased revenue to DHCN due to the improved accuracy and completeness of OHI information.

Objective IV. Conduct an interview survey with an unnamed third party insurance organization. The purpose of this interview is to assess the feasibility for entering into a business associate agreement for the purposes of sharing claims information, and to explore the incentives that may be necessary.

Methods and Procedures

Sample and Data

The data utilized in this study (n = 442 survey responses) were collected during the month of February 2004 from 0800 to 1600, Monday through Friday, using the OHI survey. The targeted population for the study was those beneficiaries presenting

civilian/hand written prescriptions to the DACH outpatient pharmacy located on Fort Belvoir. DACH's outpatient pharmacy uses a Q-Matic ticket printing system for queuing patients based on priority. By pushing a predetermined button on the Q-Matic, the beneficiary is issued an alphanumeric ticket that is customizable and is specific to their need (Q-Matic, 2003). The Q-Matic codes used at the DACH outpatient pharmacy are: A - Acute care/special needs; B - Military in uniform; C - New prescription in the computer; D - New hand written prescription; and E - Call in refill. The concierge responsible for issuing the tickets was instructed to provide an OHI survey to all beneficiaries with a valid civilian prescription requesting a "D" ticket. Completed surveys were screened daily for missing or incomplete data. To ensure data integrity, sample surveys having missing or incomplete data were removed from the study.

Operationalization of Variables

The variables used in the OHI survey and their operational definitions are summarized below.

The dependent variable was "other health insurance that provides for prescription drug coverage." It was extremely critical to the reliability of the research that this question be crafted as specific as possible to prevent confusion of the targeted population. Only respondents with OHI that is billable by the TPCP were targeted. Medicare and Medicaid are both

federal programs that are not billable under the TPCP. Due to this fact, the question specifically asked for those beneficiaries to check yes only if they had another form of health insurance covering prescription drug costs other than Medicare and/or Medicaid. The OHI variable was dichotomous coded as 1 for Yes and 0 for No.

The "five-digit zip code" to each respondent's local place of residence was requested. The Catchment Area Directory (CAD) was used to verify whether each of the zip codes was within the DHCN 40-mile catchment area (Catchment Area Directory, 2004). [Within the context of the MHS, a catchment area refers to a geographic 40-mile radius around an MTF usually associated with published TRICARE access standards.] Zip code was a dichotomous variable coded as 1 for those inside the 40-mile catchment area, and 0 for those that were not.

"Age group" was stratified into three groups: 0 to 23 years, 24 to 64 years, and 65 years or greater. There are several reasons why these groupings were used. TRICARE extends benefits to eligible children until they reach the age of 21. Children are eligible to receive benefits up to the age of 23 if they are enrolled as full time students at an accredited institution of higher education and the sponsor provides for more than 50% of their financial support (Benefits for Students, 2004). Beneficiaries over the age of 65 are no longer eligible

for enrollment in TRICARE Prime; however, are eligible for TRICARE For Life (TFL) as long as they are enrolled in MEDICARE Part B. Once captured, the age group variable was recoded into three mutually exclusive, categorically exhaustive variables each coded as 1 for Yes and 0 for No.

"Beneficiary category" was stratified into four groups: Active duty, active duty family member, retired or family member of retired, and other. The "other" category represented those beneficiaries, such as survivors, who do not make up a large portion of MHS workload. Beneficiary category was recoded into four mutually exclusive, categorically exhaustive variables each coded as 1 for Yes and 0 for No.

"TRICARE Prime" includes all beneficiaries enrolled in one of the DHCN family health centers as well as those beneficiaries enrolled in the TRICARE Plus program. This was a dichotomous variable coded as 1 for Yes and 0 for No.

"Prescriptions required per month" was stratified into four groupings: 0-2, 3-5, 6-8, and more than 8 prescriptions. Once the data were captured, this variable was recoded into four separate dichotomous variables each coded as 1 for Yes and 0 for No.

"Percentage of time the MTF pharmacy was used rather than a civilian or retail pharmacy" was stratified into four groupings: 0%-25%, 26%-50%, 51%-75%, and 76%-10%. Once the data were

captured, this variable was recoded into four separate dichotomous variables each coded as 1 for Yes and 0 for No.

Instrumentation

The instrument used for this research study was the OHI survey (Appendix B & C). Only those beneficiaries presenting to the DACH outpatient pharmacy with a civilian/hand written prescription were included in the study. The survey was one page in length and the questions dealt with other health insurance and use of the MTF pharmacy. To improve upon the content validity of the questions, the survey was reviewed by a panel of seven experts from various disciplines including statistics, managed care in the MHS, and pharmacy. Feedback on the survey was analyzed and several changes were made. Next, a field test of the survey was conducted at the DACH outpatient pharmacy. Ten beneficiaries were randomly sampled and asked to complete the survey. Each beneficiary participating in the field test was asked to comment on the survey's content, ease of use, clarity of purpose, and readability. Feedback from the field test was used to make final changes to the survey.

Analytic Methods

Survey data from returned questionnaires were coded and entered into SPSS graduate pack 11.0 for Windows by the researcher using an IBM-compatible computer. The data were analyzed using the same computer software. Data analysis

consisted of descriptive and inferential statistics. To ensure for respondent confidentiality, no unique patient identifiers were present on the data used.

Techniques of hierarchical multiple regression analysis were used to test the predictive effects of several manipulated variables on the criterion. The independent variables consisted of zip code, age group, beneficiary category, enrollment status, number of prescription drugs required per month, and the percentage of time the MTF pharmacy was used in lieu of alternative pharmacy sources.

"The hierarchical analysis consisted of a comparison of the full regression model to a series of reduced regression models in order to estimate the increase in R^2 that results when each construct or independent variable was added to the regression equations containing all other independent variables (Brooke, Hudak, & Finstuen, 1994)". For instance, to test the effects on the dependent variable uniquely attributable to the manipulated variable of zip code, a regression analysis of the full model less the manipulated variable being tested, was conducted yielding the coefficient of determination (R^2) for the restricted model for that variable. The R^2 from the restricted model was then subtracted from the R^2 of the full model yielding an R^2 change. This process was then repeated for each of the independent variables in the study. With an alpha level of .01

(α=.01) an F test was calculated to determine the statistical significance of the R^2 change for each variable.

Results

A total of 502 surveys were distributed to the targeted population at the DACH outpatient pharmacy during the month of February 2004. Of those that were distributed, 463 were completed and returned. On 06 February 2004, CHCS (the order entry system used by MHS providers) was inoperable. During this time, providers were forced to revert back to manual order entry systems, specifically hand written prescriptions. Due to the inability to delineate between the handwritten prescriptions from civilian providers and those from the MTFs provider staff during this time, the 21 survey responses from 06 February were not included in the data analysis. Of the 502 distributed surveys, 442 complete responses were received for data analysis yielding an 88.1 percent completed response rate.

Descriptive Statistics

Descriptive statistics from the OHI questionnaire are summarized in Tables I, II and III. Table I lists the raw numbers, means and standard deviations for all variables used in the study. Table II is a zero order correlation matrix displaying the inter-item correlations between all variables used within the study. Table III displays the results of the

discriminant functional analysis, with OHI used as the discriminator.

Table 1

Sample Means and Standard Deviations

Variable	n	Mean	Std. Dev.
Other Health Insurance	141	.32	.47
Zip Code Within Catchment Area	418	.95	.23
Age Group:			
Age 0 – 23 Years	23	.05	.22
Age 24 – 64 Years	176	.40	.49
Age 65 or More Years	243	.55	.50
Beneficiary Category:			
Active Duty	9	.02	.14
Active Duty Family Member	39	.09	.28
Retired/Retired Family Member	378	.86	.35
Other	16	.04	.19
Enrolled in Prime/Plus	251	.57	.50
Number of Drugs Used Per Month:			
0 – 2 Drugs	195	.44	.50
3 – 5 Drugs	160	.36	.58
6 – 8 Drugs	56	.13	.33
More than 8 Drugs	31	.07	.26
Percent of Time MTF Pharmacy Used:			
0 – 25 Percent	74	.17	.37
26 – 50 Percent	47	.11	.31
51 – 75 Percent	71	.16	.37
76 – 100 Percent	250	.57	.50

Notes: 2004; n= 442 DoD patients, OHI survey; all variables dichotomous

Overall, 31.9 percent of those responding to the OHI survey had some form of other health insurance that could be used for collection from third parties for pharmacy services. Ninety five percent of the sample had a zip code that fell within the DHCN's 40-mile catchment area. As expected, only 2 percent of the sample bringing civilian prescriptions into the MTF pharmacy was active duty, with the preponderance of the respondents, 86 percent, being retired or family members of retired. Fifty seven percent of the sample population was enrolled in TRICARE Prime or TRICARE Plus. The average weighted number of drugs used per month was 3.5 and the average weighted percent of time an MTF pharmacy was used for pharmaceutical needs was 66.2 percent. [The "average weighted number of drugs used per month" and "average weighted percentage of time the MTF pharmacy is used" were both computed by deriving the average for each category within each variable and multiplying that figure by the percentage of respondents giving an affirmative response for that category. These weighted categories were then summed to yield the weighted average for each of the two variables.]

An analysis of the bivariate correlations was conducted to determine both the direction and magnitude of the relationships between the variables present in the study. Several statistically significant correlations were established with the criterion, OHI. A significant positive correlation was

Table 2

Bivariate Correlation Matrix of OHI Survey Questions

Variable	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
y Other Health Insurance	-.05	.01	.29	-.29	-.03	-.11	.12	-.03	-.18	.09	.01	-.09	-.07	.15	.06	.11	-.23
z Zip Code Within 40mile Area		-.08	-.07	.10	-.04	.00	.04	-.06	-.07	.03	.01	-.03	-.05	.00	.05	-.08	.01
a Age 0 to 23			-.19	-.26	.04	.29	-.25	.01	.06	.18	-.09	-.09	-.06	-.05	.02	.01	.02
b Age 24 to 64				-.90	.15	.20	-.20	-.03	-.08	.19	-.08	-.10	-.08	.06	.00	.06	-.09
c Age 65 or More					-.16	-.33	.31	.03	.06	-.27	.12	.14	.11	-.03	-.01	-.06	.08
d Active Duty						-.05	-.35	-.03	.06	.13	-.08	-.06	-.04	.02	-.05	-.02	.03
e Active Duty Dependent							-.76	-.06	.16	.12	-.04	-.05	-.09	-.03	-.08	-.07	.13
f Retired								-.47	-.16	-.13	.08	.04	.04	-.01	.08	.02	-.06
g Other Beneficiary Category									.02	-.03	-.05	.04	.09	.04	.01	.08	-.10
h Enrolled in TRICARE Prime										-.07	.05	.02	.03	-.05	.01	.01	.03
i 0 to 2 Prescriptions Required Per Month											-.67	-.34	-.25	.11	.00	-.02	-.08
j 3 to 5 Prescriptions Required Per Month												-.29	-.21	-.04	.05	-.02	.01
k 6 to 8 Prescriptions Required Per Month													-.11	-.04	-.04	.06	.02
l More than 8 Prescriptions Required Per Month														-.10	-.04	.00	.10
m Use MTF 0 – 25% for Pharmacy Needs															-.16	-.20	-.51
n Use MTF 26 – 50% for Pharmacy Needs																-.15	-.39
o Use MTF 51 – 75% for Pharmacy Needs																	-.50
p. Use MTF 76% - 100% for Pharmacy Needs																	

Notes: 2004; n = 442 DoD Patients, OHI Survey, $R^2 = .19$, $r \geq .12$, $p < .01$

established between OHI and beneficiaries in the 24-64 age group (r = .29). Conversely, those beneficiaries in the 65 and over age group were negatively correlated with the dependent variable (r = -.29). Retired beneficiaries were positively correlated with having OHI (r = .12), however, there was a significant negative correlation between OHI and enrollment in TRICARE Prime/Plus (r = -.18). Of those beneficiaries that have OHI, the more likely they are to use the MTF for pharmaceutical services only 0-25% of the time (r = .15), and less likely they are to use the MTF 76-100% of the time (r = -.23).

Several other statistically significant relationships were established that provide valuable information. A positive relationship is apparent between "0-2 prescription drugs required per month" and beneficiary age groups 0-23 (r = .18) and 24-64 (r = .19). Conversely, beneficiaries in the age group over 65 were negatively correlated with 0-2 drugs (r = -.27), but were positively correlated with 3-5 drugs (r = .12), and 6-8 drugs (r = .14). The only beneficiary category having a statistically significant positive correlation with use of the MTF 76-100% of the time for prescription drug needs was active duty family members (r = .12).

Discriminant function analysis is used to determine which variables discriminate between two or more naturally occurring groups, in this case, having OHI versus not. In Table III the

means and standard deviations for each of the variables in the study is listed under the rubrics of "Yes OHI" or "No OHI". Of those beneficiaries having OHI, 60 percent were age 24-64 while 34 percent were over the age of 65. Conversely, of those beneficiaries without OHI, only 30 percent were age 24-64 while 65 percent were over 65 years of age. Beneficiaries with OHI had a TRICARE Prime/Plus enrollment rate of 44 percent while those without OHI had an average enrollment rate of 63 percent. Another variable displaying a great deal of discrimination was "MTF 76-100%". Sixty four percent of those without OHI used the MTF 76% to 100% of the time while only 40 percent of those beneficiaries retaining OHI used the MTF as often.

Table 3

Discriminant Function Analysis

	YES OHI		NO OHI	
Variable	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev**
Zip Code	.93	.258	.95	.211
Age 0 – 23	.06	.232	.05	.218
Age 24 – 64	.60	.491	.30	.460
Age 65 or More	.34	.476	.65	.478
Active Duty	.01	.119	.02	.151
Active Duty Family Mem	.04	.203	.11	.313
Retired/Retired Family Mem	.91	.280	.83	.379
Other	.03	.167	.04	.196
Enrolled in Prime/Plus	.44	.498	.63	.484
0 – 2 Drugs	.50	.502	.41	.493
3 – 5 Drugs	.37	.484	.36	.480

6 – 8 Drugs	.09	.280	.15	.354
More than 8 Drugs	.04	.203	.08	.276
MTF 0 – 25%	.25	.434	.13	.336
MTF 26 – 50%	.13	.343	.09	.291
MTF 51 – 75%	.22	.416	.13	.340
MTF 76 – 100%	.40	.491	.64	.479

Notes: 2004; n= 442 DoD patients, OHI survey; all variables dichotomous

Hierarchical Multiple Regression Analysis

Results from the hierarchical multiple regression analysis are summarized in Table IV. The full model was highly statistically significant and accounted for 19.2 percent of the shared variance between the criterion and all independent variables in the model; $F (13, 428) = 7.829$, $p < .0001$. A test of the effects of the predictors while controlling for all other predictors in the model yielded favorable results. The most statistically significant predictor that a beneficiary will have OHI was age group, accounting for 8.6 percent of the shared variance; $F (2, 428) = 22.873$, $p < .0001$. Beneficiary category, $F (3, 428) = 5.740$, and the percentage of time the MTF pharmacy is used, $F (3, 428) = 5.528$, were both found to be statistically significant with $p < .001$. Enrollment in TRICARE Prime/Plus was also found to be a significant predictor of OHI; $F (1, 428) = 6.845$, $p < .01$. The remaining predictors (Zip code and Number of prescriptions required per month) were not significant while in the presence of all other variables within the model.

Table 4

Hierarchical Hypothesis Tests of Effects on Other Health Insurance Uniquely Attributable to Independent Variables

Effect(s) Tested	R^2 Full	R^2 Restricted	R^2 Change	df1	df2	F	p
Full Model	.192112140	.000000000	.192112140	13	428	7.829	***
Zip Code	.192112140	.191298012	.000814128	1	428	.431	n/s
Age Group	.192112140	.105764098	.086348042	2	428	22.873	***
Beneficiary Category	.192112140	.159606465	.032505675	3	428	5.740	**
Enrolled in Prime/Plus	.192112140	.179191931	.012920209	1	428	6.845	*
# Drugs per Month	.192112140	.187890952	.004221188	3	428	.526	n/s
% Time Use MTF	.192112140	.160807880	.031304260	3	428	5.528	**

Notes: 2004; ***p< .0001; ** p< .001; * p< .01; n/s Not Significant

Abbreviated Business Case Analysis

The OHI survey results, coupled with other data pulled from several MHS information systems, were used to conduct an abbreviated business case analysis. According to GAO-04-322R (2004):

> Because DoD does not maintain a reliable central database containing patient insurance information, which would facilitate sampling and thus the development of a statistically based projection across the entire universe of care provided by MTFs, neither the service auditors nor we could feasibly provide a comprehensive estimate of the total third-party collections shortfall across all MTFs.

Although not of universal proportion, the purpose for this

analysis was to estimate the amount of revenue being lost by DHCN annually in potential pharmacy third party collections. The BCA solely focused on civilian prescriptions filled at the DACH outpatient pharmacy. Operational definitions for the data used to compute the results, as well as the computations used to estimate the business case have been summarized.

The number of prescriptions filled per year by the DACH outpatient pharmacy (425,000) was derived from the Pharmacy Data Transaction Service (PDTS) database for 2003. The annual prescriptions figure was multiplied by the average proportion of civilian prescriptions filled (.18) yielding a result of 76,500 civilian prescriptions annually (proportion of civilian prescriptions derived from FY 2003 CHCS data). According to the OHI survey results, 31.9% of the beneficiaries presenting civilian prescriptions to the DACH outpatient pharmacy had OHI that would reimburse pharmacy expenses. Therefore the number of billable prescriptions per year is estimated to be 31.9% x 76,500 = 24,404. To derive the average total revenue in claims possible per year, 24,404 was multiplied by the average federal supply schedule (FSS) price of $33.04 per prescription yielding $806,291.64 (average FSS price data derived from PDTS database). The researcher then used 50 percent to conservatively estimate the proportion of claims billed to those that will actually be paid (The 50% figure was based on information received from

pharmacoeconomic experts from the TRICARE Management Activity [TMA] who estimated the figure based on PDTS and current market trends). Based on these computations, DHCN should conservatively be collecting $403,146 from third parties annually for civilian prescriptions alone. The amount collected in the most recent annual period (01 March 2003 to 31 March 2004) from third party insurers for civilian prescriptions totaled $3,490 or less than 1 percent (0.87%) of the conservative prediction (actual collection amounts derived from DHCN TPOCS database).

By applying the same assumptions and formula to the entire network, the potential for revenue collection was estimated to be $2,086,872. After taking 50 percent, the conservative estimated annual collections would amount to $1,043,436. In comparison, the actual amount DHCN collected for civilian prescriptions during the annual period was $31,220, which equates to 2.99 percent of the conservative estimate.

Discussion

From the strategic level at TMA to the tactical level where the MTF Commander operates, continued vigilance and attention must be focused towards increasing third party collections. Though the results of this research are solely based on one small fraction of DHCN's entire workload, civilian prescriptions, the potential for additional revenue was shown to be tremendous. This potential is inextricably linked to the

accurate and complete capture of OHI information. Reliance on disclosure from beneficiaries has proven to be an ineffective process to ensure this end. Ultimately, the use of a business associate agreement is the only means for truly capturing complete and accurate OHI information.

Business Associate Agreement

A business associate agreement between the DHCN business office and third party payer organizations could potentially provide a win-win situation for all parties involved. TRICARE beneficiaries would pay fewer costs out of pocket if they were educated on the benefits of using the MTF pharmacy in lieu of network and non-network pharmacies; MTFs would not only have complete and accurate OHI information on enrolled beneficiaries, but would stand to increase reimbursable volume at the MTF pharmacies; third party payers could garner huge savings due to the anticipated sizable difference between MTF and civilian retail pharmacies in the average cost of pharmaceuticals; and the DoD has the potential to benefit overall from cost savings and subsequent cost avoidance associated with reducing revised financing dollars.

One of the first questions in attempting to form a business relationship for the purposes of sharing patient level claims information is whether or not it is permitted under the Health Insurance Portability and Accountability Act (HIPAA). HIPAA's

primary goals are to limit the nonconsensual use and divulgence of private health information (PHI) and to empower patients by requiring those providers of healthcare services to obtain specific patient permission to use and circulate their protected health information (DiBenedetto, 2003). However, according to HIPAA (1996) "the secretary shall adopt standards for transferring among health plans appropriate standard data elements needed for…processing of claims, and other data elements for individuals who have more than one health plan." The establishment of a business associate agreement between the privacy offices of DHCN and the third party payers, in accordance with the North Atlantic Regional Medical Command (NARMC) HIPAA compliance policy, could satisfy this requirement.

In addition to satisfying the HIPAA concerns, technology will need to be leveraged to provide for a secure, effective, and efficient means for marrying database information. By cross-referencing social security numbers between the Defense Eligibility and Enrollment Reporting System (DEERS) and similar databases maintained by third party insurance organizations, those beneficiaries with OHI could be positively identified. Not only would the beneficiary be identified, but complete, accurate, and timely information on their insurer(s) would be captured as well.

A meeting was requested with an unnamed major third party payer organization to discuss the feasibility of entering into a business associate agreement. Some of the questions to be addressed focused on HIPAA, information management/information technology (IM/IT) issues, Privacy Act issues, and incentives. Unfortunately, the researcher was unable to secure an interview. The business associate agreement is truly an ideal means of collecting OHI information that requires further research and development before it can be realized. In the mean time, several alternatives are currently available to MTF commanders to assist with the collection of OHI information.

Alternatives to Assist MTFs in TPC Efforts

One such alternative was presented in an article submitted to Army Pharmacy Technical Perles. In the article, Andersen (2003) states that as a pharmacy chief, he hired a technician to screen civilian prescriptions from outside providers to ensure the item was available on the formulary. In addition to these duties, however, the technician was used to screen DEERS eligibility and insurance. The technician used a copier to capture the insurance information and then entered it at a later time. The impact on waiting time was found to be insignificant; however, the results were not. The technician averaged collecting OHI information on more than 12 new patients per day, leading to a considerable increase in third party collections.

Another alternative DHCN is in the initial stages of implementing as part of the Walter Reed Health Care System is the use of a patient kiosk solution (Appendix D). The self-service patient kiosk solution enables beneficiaries to run their DoD identification card through a bar code reader for the purposes of checking in for an appointment. Dependent on the mission requirements, these kiosks can also be used for tailored surveys, health risk assessments, and for requesting OHI information (Walter Reed Health Care System, 2004).

Education of the patient is also important. Based on the results of the OHI survey, when fiscal resources are limited, education platforms should be targeted towards those beneficiaries predicted to have greater levels of OHI. Age group shared the most variance (8.6%) with OHI. Beneficiaries between the ages of 24 - 64 were positively correlated with OHI (r = .29) while those over the age of 65 were negatively correlated (r = -.29). The correlation between OHI and beneficiaries aged 0 - 23 was found to be not statistically significant (r = .01). In terms of beneficiary category, retired and family members of retired was the only variable that had a positive correlation with OHI (r = .12). Consequently, the beneficiaries most likely to have OHI are those that are retired under the age of 65.

Additional Items to Consider

Encompassing 100 percent OHI information is certainly not enough to have a successful TPCP. In addition to improving the efficiency and effectiveness of collecting OHI information, there are several other areas that require attention. These additional areas include IM/IT efficiency, improved provider documentation, and improved coding of patient charts.

The DHCN TPCP is currently sharing a server with several other MTFs within the NARMC region. The server is located off the Fort Belvoir installation, leading to inefficiencies and difficulties due to multiple firewalls and the inability to troubleshoot when the system is down due to not physically having ownership of the system. Dependent on the amount of information being transmitted at any given time of the day, downloading a single claim from the TPOCS server can take up to 25 - 35 minutes. This degradation of service significantly hinders the ability of the TPOCS administrators to keep up with the growing number of claims.

The DHCN leadership is currently researching the option of breaking away from the shared server in order to increase the efficiency of the system, thereby increasing the generation of bills and revenue. There are costs associated with maintaining a server to include the capital purchase, system backup, user/password management, event log maintenance, updates to

anti-virus signature files, and remote helpdesk access. A cost benefit analysis should be conducted prior to making such a decision.

Certainly none of the collections from third parties would be possible without the proper documentation by providers and the accurate and complete coding of the services provided. Efforts to standardize documentation and improve the efficiency and effectiveness of the coders (whether using certified registered coders or providers are coding their own records) must remain a focus. The DHCN has recently begun the transition from paper-based to computerized health records. Although the computerized health record is not a panacea for improving documentation and coding, it is unquestionably a step in the right direction.

Limitations and Implications for Future Research

The primary limitation to this study is the inability to generalize the results to other MTFs other than the DHCN due to possible significant differences in population demographics and local market forces. Generalizability also may not extend to beneficiaries other than to those within the sample selected. In future studies, the researcher recommends a sample that is more generalizable back to the entire MHS population. This would entail surveying beneficiaries at several different MTFs across the different TRICARE regions unconstrained by the types of

services provided (i.e. limiting the study to just civilian prescriptions).

Several improvements to the survey process should be implemented if this research is replicated for further study. The sample used for this study was relatively small (n = 442) compared to the population of roughly 153,000 eligible beneficiaries within the DHCN catchment area. A larger sample size would certainly broaden the ability to make generalizations with the results and to improve the validity of the process. The broad ranges used for stratifying age groups inhibited the analysis. Age group was found to be the best predictor of OHI, and the age group most positively correlated with OHI was 24 - 64 years. Stratifying the age group variable into more categories would allow for a more precise definition of those beneficiaries most likely to have OHI. In addition to changes to the OHI survey, pursuing the possibilities for formulating business associate agreements with third party payers is indeed an area that deserves continued research.

Conclusion

In all, this research provided groundbreaking insight into a current issue regarding the collection and utilization of OHI information within uniformed services MTFs. Through design, the third party collection program is a valuable resource to MTF commanders in meeting mission requirements by injecting revenue

back into the facility. Unfortunately, this program often times gets little to no attention. Without doubt there are many competing requirements during the day-to-day operation of a healthcare organization, so why should the TPCP be a priority? One astounding reason is due to the extraordinary potential for revenue generation that can provide capital to resource many un-funded patient and staff quality and satisfaction initiatives. Whatever the reason, the researcher is optimistic that the results of this study will provide impetus for action.

Appendices

Appendix A – DD Form 2569

THIRD PARTY COLLECTION PROGRAM - RECORD OF OTHER HEALTH INSURANCE
(Read Privacy Act Statement before completing this form.)

Form Approved OMB No. 0704-0329 Expires Jul 31, 2003

The public reporting burden for this collection of information is estimated to average 3 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0329), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THIS ADDRESS. RETURN COMPLETED FORM TO REQUESTING MILITARY TREATMENT FACILITY.

PRIVACY ACT STATEMENT

AUTHORITY: Title 10 USC, Sec. 1095; ID 9397.
PRINCIPAL PURPOSE(S): Information will be used to collect from private insurers for medical care provided to the Military Treatment Facility (MTF) patient. Such monetary benefits accruing to the MTF will be used to enhance health care delivery in the MTF.
ROUTINE USE(S): The information on this form will be released to your insurance company.
DISCLOSURE: Voluntary; however, failure to provide complete and accurate information may result in disqualification for health care services from facilities of the uniformed services.

1. PATIENT NAME (Last, First, Middle Initial)	2. SSN	3. DATE OF BIRTH (YYYYMMDD)	4. MARITAL STATUS (X) ☐ SINGLE ☐ MARRIED ☐ DIVORCED/WIDOWED
5a. STREET ADDRESS (Include apartment number)	b. CITY	c. STATE / d. ZIP CODE	6. HOME TELEPHONE NO. ( )
7. SPONSOR'S BRANCH OF SERVICE	8. SPONSOR FAMILY MEMBER PREFIX/ SSN	9a. SPOUSE NAME (Last, First, Middle Initial)	
10a. PATIENT'S EMPLOYER NAME	b. TELEPHONE NUMBER ( )	b. SPOUSE'S EMPLOYER (Name, Address and Telephone No.)	
c. EMPLOYER ADDRESS (Include ZIP Code)			

11. IS PATIENT'S CONDITION/APPOINTMENT RELATED TO AN ACCIDENT (X one)	☐ YES ☐ NO	a. DATE OF INJURY/ACCIDENT (YYYYMMDD)	b. CITY AND STATE WHERE ACCIDENT OCCURRED
c. TYPE OF ACCIDENT (X) ☐ AUTO ☐ BOAT ☐ HOME ☐ AIRPLANE ☐ WORKERS' COMPENSATION ☐ SLIP & FALL ☐ OTHER			
d. BRIEFLY DESCRIBE HOW INJURY/ACCIDENT OCCURRED			

e. INSURANCE COMPANY NAME	f. POLICY NUMBER	g. COMPANY ADDRESS (Include ZIP Code)
h. TELEPHONE NUMBER ( )	i. NAME OF POLICY HOLDER/INSURED	j. CLAIM NUMBER

12. DO YOU HAVE MEDICARE/MEDICAID (If none)	☐ YES ☐ NO		
a. MEDICARE PART A NUMBER	b. MEDICARE PART B NUMBER	c. MEDICAID NUMBER	d. ISSUING STATE

13. ARE YOU COVERED UNDER ANY OTHER HEALTH INSURANCE POLICY? (Other than Medicare, Medicaid, TRICARE or CHAMPVA)	☐ YES ☐ NO

14a. PRIMARY MEDICAL INSURANCE COMPANY NAME	15a. SECONDARY MEDICAL INSURANCE COMPANY NAME
b. ADDRESS (Include ZIP code)	b. ADDRESS (Include ZIP code)
c. TELEPHONE NUMBER ( ) / d. IDENTIFICATION NUMBER/ GROUP NUMBER	c. TELEPHONE NUMBER ( ) / d. IDENTIFICATION NUMBER/ GROUP NUMBER
e. POLICY HOLDER'S NAME (Last, First, Middle Initial)	e. POLICY HOLDER'S NAME (Last, First, Middle Initial)
f. SSN / g. DATE OF BIRTH (YYYYMMDD)	f. SSN / g. DATE OF BIRTH (YYYYMMDD)
h. POLICY HOLDER'S EMPLOYER NAME, ADDRESS AND TELEPHONE NO.	h. POLICY HOLDER'S EMPLOYER NAME, ADDRESS AND TELEPHONE NO.
i. EFFECTIVE DATE OF POLICY (YYYYMMDD)	i. EFFECTIVE DATE OF POLICY (YYYYMMDD)

16. FAMILY MEMBERS COVERED BY ABOVE POLICIES (Use additional pages if more space is required.)

a. NAME (Last, First, Middle Initial)	b. SSN	c. DATE OF BIRTH (YYYYMMDD)	a. NAME (Last, First, Middle Initial)	b. SSN	c. DATE OF BIRTH (YYYYMMDD)

17. CERTIFICATION. I certify that the above information on this form is true and accurate to the best of my knowledge. Falsification of information is covered by 18 USC 1001, which provides for a maximum fine of $10,000 or imprisonment for five years, or both. For non-DoD beneficiaries, the below signature authorizes and requests that the proceeds of any and all benefits be paid directly to the Military Treatment Facility (MTF) for health care services provided me and/or my minor dependents. This signature authorizes Medical Service Account (MSA) patients' release of medical information (medical records) for claims.

a. SIGNATURE	b. DATE (YYYYMMDD)

DD FORM 2569, SEP 2000 PREVIOUS EDITION IS OBSOLETE. USAPA V1.00

Appendix B - OHI Survey Cover Letter

Other Health Insurance Questionnaire (Additional Information)

Thank you in advance for your time and consideration in completing this questionnaire. This questionnaire is being conducted as a part of a graduate management project. The questionnaire is 100% anonymous and voluntary. The results of the survey will be used to improve the DeWitt Health Care Network and the services it provides. The following additional information is provided to assist you in filling out the questionnaire.

1. Self explanatory.

2. Self explanatory.

3. National Guard (NG) and Reserve currently on Active Duty (AD) should mark AD; Family Members of NG and Reserve currently on AD should mark Active Duty Family Member.

4. If the recipient of the prescription drugs is enrolled in TRICARE Prime or Plus (i.e. enrolled at DeWitt Army Community Hospital, Fairfax Family Health Center, Woodbridge Family Health Center, Rader Health Clinic, or any other military treatment facility) check Yes.

5. Self explanatory.

6. For instance, if the recipient physically takes drugs A, B, C, and D each month, then the correct answer to this question would be 3 – 5 regardless of whether the recipient receives a 30 day or 90 day supply. If the recipient got drug A in June 2003 and is getting drug B now in January 2004, the correct answer to this question would be 0 – 2, etc.

7. Please estimate the percentage of time the MTF pharmacy is used rather than a civilian retail pharmacy.

(0%-25%) = Not often
(26%-50%) = Some to half of the time
(51%-75%) = Half to most of the time
(76%-100%) = Most to all of the time

If you have any additional questions, feel free to contact me by phone at (703) 805-9336.

Sincerely,

Edward J. Weinberg
Captain, US Army
US Army Baylor Masters Program
In Health Care Administration

Appendix C - OHI Survey

Other Health Insurance Questionnaire

Directions: Using the alternatives provided with each question, please check the response that most closely represents your answer. The results of this survey are, and will remain, completely anonymous. ***See back for further explanation on any of the questions.***

"The word ***recipient* refers to the person for whom the" prescription is being filled.**

1. What is the 5 digit zip-code to the recipient's local residence? ☐☐☐☐☐

2. Which of the following categories best represents the recipient's age?

0-23 Years ☐ 24-64 Years ☐ 65 Years or More ☐

3. Which of the following categories best represents the beneficiary status of the recipient?

Active Duty ☐ Active Duty Dependent ☐
Retiree or Retiree Dependent ☐ Other ☐

4. Is the recipient enrolled in TRICARE *Prime*?

Yes ☐ No ☐

5. Other than TRICARE, MEDICARE and MEDICAID, is the recipient covered by any other form of health insurance that covers prescription drugs?

Yes ☐ No ☐

6. On average, how many prescriptions does the recipient require per month?

0 – 2 ☐ 3 – 5 ☐ 6 – 8 ☐ More than 8 ☐

7. On average, how often does the recipient use a military treatment facility (MTF) pharmacy for his/her prescription drug needs?

(0% – 25%) ☐ (26% – 50%) ☐ (51% – 75%) ☐ (76% – 100%) ☐

Thank you for your time and cooperation! Please place the completed questionnaire in the box located at the desk where you received it. Again, this information will remain completely anonymous.

Appendix D – Patient Kiosk Solution

Walter Reed Health Care System

Patient Kiosk Solution

What is the Patient Kiosk Solution?

The WRAMC Patient Kiosk Solution allows patients to check themselves in using self-service kiosks conveniently located in the waiting area. They identify themselves to the kiosk by running their DoD ID card through the kiosk barcode reader. The kiosk then automatically retrieves appointments from CHCS for that patient for that day, and allows the patient to select the appointment for which he came, or select a reason for an unscheduled visit, as appropriate. The kiosk interacts with CHCS and ICDB to check the patient in and to provide the patient with his personalized health maintenance summary. At the end of a patient's interaction with the kiosk, the nurse is paged and a summary sheet is printed out using integrated into the kiosk.

What are the mission needs?

Many Medical Treatment Facilities are seeking to improve access to care by streamlining individual patient check-in procedures. A highly intuitive, user friendly Patient Kiosk enables patients to check-in for clinic appointments on their own, without having to wait in line at the front desk. The Patient Kiosk can help relieve the considerable burden often placed on front desk clerks who currently perform the time-intensive patient check-in function. WRAMC's Patient Kiosk Solution provides another valuable service to patients by reminding them of upcoming and/or overdue preventive health screenings and exams (e.g. mammograms, etc.)

What is the impact on the organization if the system is not running?

Patients would need to report to the Clinic Front Desk to check in for their appointments, so there would be a disruption of clinic workflow and in processing if the automated system was not available. There would be no possibility of harm to a patient or MTF staff member if the Kiosk Application were not running.

What customer base will this system service?

The system will service beneficiaries, as their appointment check-in process will be streamlined and more efficient. The system will service WRAMC personnel as clinic staff can insert more efficiency into.

What type of information will be processed?

Patient FMP/SSN. List of appointments for patient for current day, if any. Patient demographic data. Patient insurance information. Patient health maintenance items. Whether patient agrees to fill out satisfaction survey. Patient answers to satisfaction survey.

References

32 CFR 220 (2000). Collection from third party payers of reasonable costs of healthcare services. Washington, D.C.: Department of Defense.

Andersen, D. C. (2003). *Another twist on the third party collection process*. Retrieved January 8, 2004, from http://akosecured.detrick.army.mil/msc/67e/tperle4.htm

Assistant Secretary of Defense for Health Affairs. (1999). Policy for dispensing prescriptions in outpatient military pharmacies. Washington, D.C.

Brooke, Jr., PP, Hudak, RP, & Finstuen, K. (1994). Product-line evaluation of graduate medical education program costs. *Hospital and Health Administration, 39*(2), 265-278.

Catchment Area Directory. (2004). Retrieved February 26, 2004 from Catchment Area Directory.

Caterinicchia, D. (2002, November 11). DoD approves electronic medical record system. Retrieved November 17, 2003, from Federal Computer Week Web Site: http://www.fcw.com/fcw/articles/2002/1111/news-dod-11-11-02.asp

Denner, L. (2003, July 25). Clinic to require information on additional insurance. Retrieved November 18, 2003, from Hanscom Air Force Base Web Site: http://www.hanscom.af.mil/Hansconian/Articles/2003Arts/072520 03-11.htm

DiBenedetto, D. V. (2003). HIPAA privacy 101: Essentials for case management practice. *Lippincott's Case Management, 8*(1), 14-23.

DoD (2002 October 30). *Delivery of healthcare t military treatment facilities* (6015.23). Washington, D.C.: U.S. Department of Defense.

G.A.O. (2003, October). TRICARE claims processing has improved but inefficiencies remain (GAO-04-69). Washington D.C.: United States General Accounting Office.

G.A.O. (2004 February 20). *Military treatment facilities: Improvements needed to increase DoD third-party collections* (GAO-04-322R). Washington, DC: United States General Accounting Office.

HIPAA (1996 August 21). *Health Insurance Portability and Accountability Act of 1996 (f) transfer of information among health plans* (PL 104-191). Washington, D.C.: U.S. Congress.

McCollum, W. E. (1997, July 4). Hospitals delighted, patients divided over third-party charges. Retrieved November 18, 03, from USAF Retiree Activities Program Web Site: http://public.scott.amc.af.mil/375aw/rao/Section1/SSec1.13.1.htm#1-20f

Morreim, E. H. (1995). Balancing act: the new medical ethics of medicine's new economics. Washington D.C.: Georgetown University Press.

Murray, T. H. (n.d.). Are we in a health care crisis? Retrieved November 17, 2003, from http://www.hrainc.org/articles/healthcarecrisis.asp

Pace, D. (2002, November 20). Military hospitals' records decried. Washington Post. Retrieved November 17, 2003 from http://www.washingtonpost.com/wp-dyn/articles/A12360-2002Nov19.html

Pedhazur, EJ (Ed.). (1982). *Multiple regression in behavioral research* (2nd ed.). New York: Holt, Rinehart and Winston.

Q-Matic Corp. (2003). *Q-Matic Ticket Printers*. Retrieved February 9, 2004, from http://us.q-matic.com/ticket_printers.html

Remund, D. D. (2003). *Update on the DoD pharmacy benefit*. Retrieved March 12, 2004, from http://www.pec.ha.osd.mil

Shi, L., & Singh, D. A. (2001). Delivering healthcare in America: a systems approach (2nd ed.). Gaithersburg, Maryland: Aspen Publishers, Inc.

Spurway, P. (2003). Rising cost of healthcare. Retrieved November 17, 2003, from http://www.fepblue.org/newsletters/newsstnov03/stblbr2-nov03.html

Stires, D. (2003, February 18). Healthcare costs - The breaking point. Retrieved November 17, 2003, from FORTUNE Web Site: http://www.hrainc.org/articles/fortunehealthcoststhebreakingpoint.asp

Title 10 U.S.C. - Armed Forces, Chapter 55 - medical & dental care, Section 1095 third party collections (1956).

TMA (2001 January 04). Third party collection program (TPCP) business process reengineering (BPR) implementation demonstration evaluation report (263-96-D-0327). Falls Church, VA: TRICARE Management Activity.

TRICARE Benefits for College Students. (n.d.).*TRICARE Management Activity*. Retrieved January 22, 2004, from http://www.tricare.osd.mil/collegestudents/index.cfm

TRICARE Handbook. (n.d.). *TRICARE cost comparison charts*. Retrieved January 22, 2004, from TMA Web Site: http://www.tricare.osd.mil/tricarehandbook/

Walter Reed Health Care System. (2004). *Patient kiosk solution* [Brochure]. Washington, D.C.: Author.